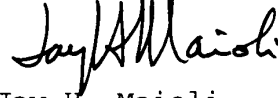


An early and favorable examination on the merits is earnestly solicited.

Respectfully submitted,

COOPER & DUNHAM

A handwritten signature in dark ink, appearing to read "Jay H. Maioli". The signature is written in a cursive, flowing style.

Jay H. Maioli
Reg. No. 27,213

JHM/HYL:nj

VERSION WITH MARKINGS TO SHOW CHANGES MADEIN THE ABSTRACT

Please amend the abstract by rewriting same to read as follows.

--[In an] An electronics packaging system(1) including a printer(3), a placing unit(4) and a reflow unit(5), wherein a printed wiring board(2) is carried while being kept in an upright position. The printed wiring board(2) has solder printed on all the lands thereof at the same time, the electronic parts(10) are all placed on the lands at the same time, and the electronic parts(10) [solder] are all soldered to the lands at the same time. Thus, the system(1) can be designed more compact, and [package] the electronic parts packaged in a shorter time.--

IN THE CLAIMS

Claims 1-17 remain in the application and claims 1-8 and 10-15 have been amended hereby.

--1. (Amended) An electronics packaging system comprising:
a printer to print solder [to either land] on lands of a printed wiring board;

a placing unit to place electronic parts on the lands of the printed wiring board[,] having the solder printed thereon by the printer; and

a reflow unit to heat the printed wiring board on which the electronic parts have been placed by the placing unit and to solder the electronic parts to the printed wiring board[;],

the printed wiring board being brought by a transfer mechanism, while being held in generally upright position, in order through the printer, the placing unit and the reflow unit [in this order].

--2. (Amended) The system according to claim 1, wherein:

land-position information is generated by a detecting mechanism provided in the printer before the solder is printed by the printer on the lands of the printed wiring board; and

the placing unit places the electronic [part] parts on the printed wiring board based on [the basis of] the land-position information.

--3. (Amended) [In an electronics packaging system, an] An electronic-part placing unit comprising:

a transfer [mechanisms to carry] mechanism for carrying a printed wiring board while keeping [it] the printed wiring board in [generally] an upright position;

a part holding mechanisms [to hold] for holding, by suction, an electronic part supplied from a part feeder;

a turning mechanisms [to shuttle] for shuttling the part holding mechanism between a first position in which the electronic part supplied from the part feeder is held by suction and a second position where [it] the electronic part is opposite

to the printed wiring board supported by the transfer [mechanisms] mechanism; and

a guide mechanism including first and second guide members [to guide the] for guiding an up-down movement of the part holding mechanism in the second position[;], wherein

when the part holding mechanism [has been] is elevated to the second guide member, the second guide member [has been] is moved to the printed wiring board held by the transfer [mechanisms] mechanism and the part holding mechanism places the electronic part on the printed wiring board.

--4. (Amended) The electronic-part placing unit according to claim 3, wherein[:]

the turning mechanism includes a rack disposed along [the] a direction in which the part holding mechanism is moved up and down[,], and a gear provided integrally with the part holding mechanism and engaged with the rack; and

as the part holding mechanisms is moved up and down, the gear in mesh with the rack is rotated to shuttle the part holding mechanism between the first and second positions.

--5. (Amended) The electronic-part placing unit according to claim 3, wherein[:]

there is provided in a position opposite to the part holding mechanism [staying] in the second position a detector to detect [the] a held state of the electronic part held by the part holding mechanism, the part holding mechanism including an

adjusting mechanism rotatable about a direct perpendicular to the [up-down moving] direction [of] in which the part holding mechanism is moved up and down to adjust the held state of the electronic part.

--6. (Amended) The electronic-part placing unit according to claim 3, [juxtaposed with] wherein the transfer [mechanisms and] mechanism is positioned by engagement with a positioning unit provided on a base plate.

--7. (Amended) The electronic-part placing [mechanism] unit according to claim 6, further comprising placing means for placing an electronic part in a position downstream of the transfer [mechanisms while] mechanism and for placing an electronic part in a position contiguous to the downstream position and upstream of the transfer mechanisms.

--8. (Amended) [In an electronics packaging system, a] A printer comprising:

a transfer mechanism [to carry] for carrying a printed wiring board while keeping [it] the printed wiring board [generally] an upright position;

a pair of screen mechanisms each including a screen disposed opposite to the printed wiring board supported by the transfer mechanism [movably] and each being movable towards and away from the printed wiring board;

a squeegee mechanism disposed correspondingly to each of

said pair of screen [mechanism] mechanisms to be slid by the screen of each of said pair of screen mechanisms and to squeeze ink to the printed wiring board as the screen is moved towards the printed wiring board; and

a driving mechanism [to move] for moving the pair of screen mechanisms so as to slide the squeegee mechanism.

--10. (Amended) The printer according to claim 8, wherein the driving mechanism includes:

a [single] drive motor;

a driving force transmission to transmit the force from the drive motor; and

a moving member to move the squeegee mechanism by means of the [driving] force [transmission when] from the drive motor [is in operation].

--11. (Amended) The printer according to claim 8, wherein:

the transfer mechanism [include] includes a pair of guide rails to support the printed wiring board at [the] edges thereof and being [in] arranged parallel to [the] a direction in which the printed wiring board is [to be] carried;

each of the guide rails [including] includes a pair of engaging and [support] supporting plates disposed opposite to each other to support, by engagement, the edges of the printed wiring board; and

each of the [engagement] engaging and [support] supporting plates has a thickness [with which it] , whereby each of the

engaging and supporting plates with which it is deflected into close contact with the printed wiring board when the screen is pressed by the squeegee mechanism.

--12. (Amended) The printer according to claim 8, wherein there is provided near [the] an end of the squeegee mechanism an auxiliary arm to roll the ink when the squeegee mechanism makes the screen slide.

--13. (Amended) The printer according to claim 8, further including a detector to detect a position detection mark provided on the printed wiring board and [thus] to detect [the] a posture of the printed wiring board supported on the pair of guide rails.

--14. (Amended) The printer according to claim 13, further including an adjusting mechanism to correct the posture of the printed wiring board supported on the pair of guide rails.

--15. (Amended) [In an electronics packaging system, a] A reflow unit comprising:

a transfer mechanism [to carry] for carrying a printed wiring board having cream solder printed wiring board having a cream solder printed on lands thereof while keeping [it] the printed wiring board in [generally] an upright position;

a reflow furnace [to heat] for heating the printed wiring board supported by the transfer mechanism and [thus melt] formatting the cream solder printed on the lands;

a first heating mechanism provided in the reflow furnace arranged to face on main side of the printed wiring board supported by the transfer mechanism;

a second heating mechanism provided in the reflow furnace arranged to face [the] an other main side of the printed wiring board supported by the transfer mechanism; and

a third [heating] heating mechanism provided in the reflow furnace [to heat,] for heating from below, the printed wiring board supported by the transfer mechanism.